

THE GENERA OF THE LISPININAE  
OF AMERICA NORTH OF MEXICO  
(COLEOPTERA:STAPHYLINIDAE)

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ABSTRACT

A key is given to the genera of the subfamily Lispinae of America north of Mexico. A full generic description, distributional notes, and a habitus illustration of a member of each of the following genera is presented: *Thoracophorus* Motschulsky, *Clavilispinus* Bernhauer, *Renardia* Motschulsky, *Eleusis* Laporte, *Nacaeus* Bernhauer and *Lispinus* Erichson.

The genera of very few of the North American Staphylinidae have been adequately described and illustrated. The treatment which follows should for the first time make identification of genera of the subfamily Lispinae easy.

Because of their small anterior coxae and often depressed form, members of this subfamily have usually been associated with the Piestinae. Blackwelder (1942) united them with the Osoriinae because of their unmarginated abdomens. Moore (1964), considering the above characters partly adaptive (in some cases modification useful in a subcortical habitat), removed these genera to a subfamily by themselves, Lispinae.

The Lispinae may be briefly characterized as follows (Moore 1964): antennae 11-segmented, inserted at front margin of head near eyes; second abdominal segment absent; abdomen without paratergites; anterior coxae small, globose or peg shaped, usually not longer than wide.

Like the Osoriinae and Piestinae this is a large tropical subfamily, only a few of whose members are found in temperate regions. Most species are found under the bark of dead trees.

KEY TO THE GENERA OF THE LISPININAE  
OF AMERICA NORTH OF MEXICO

- |        |   |                                  |   |
|--------|---|----------------------------------|---|
| 1.     | Tarsi 3-segmented .....   | <i>Thoracophorus</i> Motschulsky |   |
| 1'.    | Tarsi 5-segmented .....   |                                  | 2 |
| 2(1'). | Anterior coxae contiguous .....   |                                  | 3 |
| 2'.    | Anterior coxae separated by a spatulate process of the<br>prosteron ..... |                                  | 5 |
| 3(2).  | Pronotum half as wide at base as apex .....                               |                                  | 4 |
| 3'.    | Pronotum little narrowed at base .....                                    | <i>Clavilispinus</i> Bernhauer   |   |

- 4(3). Head with 2 longitudinal frontal impressions; pronotum with 2 apical denticles..... *Renardia* Motschulsky
- 4'. Head without frontal impressions; pronotum without apical denticles..... *Eleusis* Laporte
- 5(2'). Abdominal sternites without diagonal strigae ..... *Nacaeus* Blackwelder
- 5'. Abdominal sternites with diagonal strigae which are sometimes not completely separate from the large punctures..... *Lispinus* Erichson

### *Clavilispinus* Bernhauer

**Form.** Small, subcylindrical. Integuments rather densely, not coarsely, sculptured.

**Head.** Head quadrate, with or without a neck. Eyes moderate, not prominent. Antennae somewhat incrassate; their fossae located in front of eyes under a distinct ridge. Mandibles stout at base, short, with apex pointed and slightly hooked. Labrum transverse, apex evenly, not deeply emarginate, with few long setae and numerous ciliae. Maxillary palpi 4-segmented; first segment short; second longer than wide; third short, transverse; fourth almost as wide as third, twice as long as wide, slightly narrowed to rounded apex. Inner lobe of maxilla narrow, strongly hooked at apex, densely ciliate within. Outer lobe broad at apex which is densely ciliate. Labial palpi 3-segmented; first segment about as long as wide; second very short, transverse, as wide as first; third narrower than second, longer than wide. Ligula small, transverse, with a slender chitinous rod on each side extending well beyond apex. Gular sutures united. Infraorbital carina wanting.

**Thorax.** Pronotum quadrate. Prosternum large, its process very short and blunt. Lateral prosternal sutures distinct. Hypomera delimited by a sharp edge. Trochantin rectangular. Prosternal epimera not delimited by a carina, represented by a long, slender, pointed extension of hypomera. Mesosternum short, its process acute, extending halfway between coxae. Metasternum long, its process extending halfway between coxae to meet mesosternal process. Elytra quadrate, epipleura delimited by a carina. Scutellum prominent. Anterior coxae small, peg-shaped, contiguous. Middle coxae round, narrowly separated. Posterior coxae triangular. Tibiae without spines. Tarsi 5-segmented; first 2 segments very short; next 2 a little longer; fifth longer than first 4 together.

**Abdomen.** Abdomen cylindrical. First 5 visible segments without paratergites, not impressed or constricted. First visible segment not keeled between the coxae.

**Distribution.** Besides the 5 species known from the United States, 17 other species have been described from the tropics of both hemispheres. The species are found under bark of dead trees.

**Notes.** Hatch (1957) used the name *Paralispinus* Bernhauer for this genus, however that name is preoccupied by *Paralispinus* Eichelbaum and must give way to *Clavilispinus*.

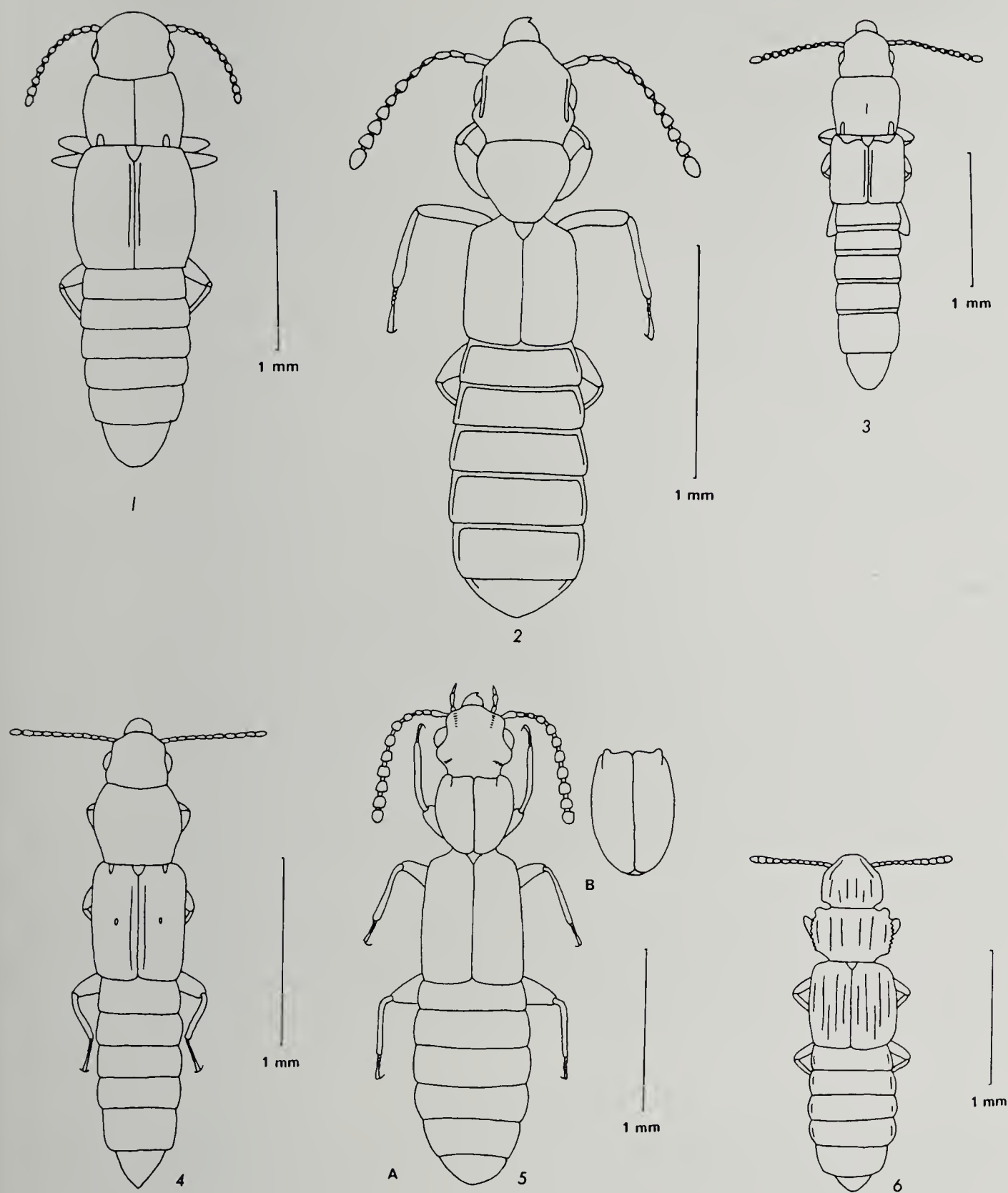


Fig. 1. *Clavilispinus californicus* (LeConte). Fig. 2. *Eleusis pallida* LeConte. Fig. 3. *Lispinus aequipunctatus* LeConte. Fig. 4. *Nacaeus tenellus* (LeConte). Fig. 5. A, *Renardia nigrella* (LeConte), female. Fig. 5. B, *Renardia nigrella* (LeConte), pronotum of male. Fig. 6. *Thoracophorus fletcheri* Wendler.



*Eleusis* Laporte

**Form.** Elongate, parallel, very depressed. Integuments shining, very feebly sculptured.

**Head.** Head quadrate, without frontal impressions, with a longitudinal carina over each eye, narrowed behind to form a broad neck. Eyes moderate, somewhat convex. Antennae slightly incrassate, penultimate segments transverse; their fossae located in front of eyes under a very slight prominence. Mandibles stout at base, hooked at tip, with 2 small central teeth internally. Labrum transverse, apex broadly emarginate and furnished with 4 large setae and numerous small ciliae each side. Maxillary palpi 4-segmented; first segment short; second short, broad at apex; third stout, about twice as long as wide; fourth narrower and a little shorter than third. Inner lobe of maxilla narrow, pointed, hooked at apex. Outer lobe wide and densely setose at apex. Labial palpi 3-segmented; first segment longer than wide; second a little narrower, transverse; third a little narrower, slightly longer than wide. Ligula with apex tri-lobed, the outer lobes largest. Gular sutures united for most of their length, widely diverging at base. Infraorbital carina wanting. With a longitudinal sulcus on the under side behind each eye.

**Thorax.** Pronotum not longer than wide, narrowed at base, with 2 large punctures each side at apex. Prosternum elongate, its process hardly pointed. Lateral prosternal suture distinct. Hypomera not delimited by a suture. Trochantin prominent, elongate, directed diagonally toward anterior angle of thorax. Prosternal epimeron not delimited by suture. Mesosternum short, its process short and acute. Metasternum long, its process short and acute. Elytra quadrate. Epipleura not delimited by carina. Scutellum prominent. Coxae contiguous; anterior small, peg-shaped; middle rounded; posterior transverse and somewhat triangular. Tibiae without spines except at apices. Tarsi 5-segmented; first 4 short and equal, last longer than first 4 together.

**Abdomen.** Paratergites lacking. First visible sternite not keeled between coxae.

**Distribution.** This large, tropical genus is represented in the United States by only 2 known species. Through 1966, about 187 species had been described from the tropics in all parts of the world. A very few species have been recorded from the temperate zones. The species are found under the bark of trees.

*Lispinus* Erichson

**Form.** Small, linear, subcylindrical. Integuments not coarsely sculptured.

**Head.** Head not narrowed behind to form a neck. Eyes moderate, not very prominent. Antennae somewhat incrassate, their fossae located in front of eyes under distinct ridge. Mandibles stout at base, abruptly narrowed near apex and thence sharply hooked to pointed apex. Labrum with apex evenly, arcuately emarginate and setose. Maxillary palpi 4-segmented; first segment small; second a little longer than wide, widest at apex; third very short, transverse, as wide as apex of second, fourth as wide as third, about 3 times as wide as long, hardly narrowed to rounded apex. Maxilla with inner lobe narrow, outer lobe wide at apex, which is densely ciliate. Labial palpi 3-segmented, first 2 segments short, third twice as long as wide. Ligula transverse, its apex with a pair of short, chitinous rods. Gular suture divergent behind. Infraorbital carina lacking.

**Thorax.** Pronotum quadrate. Prosternum large, its process spatulate, extending between coxae. Lateral prosternal suture faint. Hypomera delimited by a carina. Trochantin small, subrectangular. Epimera not delimited by a suture. Mesosternum short, its process narrow, pointed, extending about halfway between coxae. Metasternum large, its process pointed, extending between coxae to meet mesosternal process. Elytra quadrate, with sutural stria, epipleura delimited by carina. Scutellum large. Anterior coxae small, globose, separated. Middle coxae round, narrowly separated. Posterior coxae transverse, somewhat triangular. Tibiae without spines except at apex. Tarsi 5-segmented, the first 4 segments short, fifth as long as first 4 together.

**Abdomen.** Abdomen cylindrical, without paratergites. First visible segment with small keel between coxae.

**Distribution.** A very large number of species have been described in this genus from all parts of the tropics. It is possible that many of these will be found to belong to *Nacaeus*, as defined in this work. A few species are known from temperate regions. The species are usually found under bark of dead trees.

**Notes.** The single Nearctic species placed in this genus has the salient character of diagonal strigae on the underside of the abdomen somewhat obscured by large elongate punctures.

### *Nacaeus* Blackwelder

**Form.** Small, linear, subcylindrical. Integuments not coarsely sculptured.

**Head.** Head not narrowed behind to form a neck; with 2 faint longitudinal frontal impressions. Eyes not very prominent. Antennae somewhat incrassate; their fossae located in front of eyes under distinct ridge which is tumid above each insertion. Mandibles stout at base, nearly parallel-sided to near apex where they are abruptly narrowed and thence sharply hooked to pointed apex. Labrum with apex broadly emarginate and setose. Maxillary palpi 4-segmented; first segment small; second and third each about as wide as long; fourth nearly as wide as and twice as long as 2 preceding together. Inner lobe of maxilla narrow, outer lobe broad at apex. Labial palpi 3-segmented, first 2 segments short, third a little narrower and about as long as first 2 together. Ligula transverse, broadly emarginate at apex. Gular sutures divergent behind. Infraorbital carina lacking.

**Thorax.** Pronotum quadrate. Prosternum large, its process narrow, pointed, extending well between coxae. Lateral prosternal sutures faint. Trochantin short and very narrow. Epimera not delimited by suture. Mesosternum short, its process narrow, pointed, extending halfway between coxae. Metasternum large, its process pointed, meeting mesosternal process between coxae. Elytra quadrate, impressed at base, with sutural stria, epipleura delimited by carina. Scutellum large. Anterior coxae small, globose, narrowly separated. Middle coxae small, round, narrowly separated. Posterior coxae transverse and somewhat triangular. Tibiae without spines. Tarsi 5-segmented, first 4 segments very short, last longer than others together.

**Abdomen.** Abdomen cylindrical, without paratergites. First visible segment with small keel between coxae.

**Distribution.** Several tropical species from both the Old and New Worlds are placed in this genus.



**Notes.** This genus is distinguished from *Lispinus* largely on the basis of the lack of diagonal strigae on the abdomen. A large number of species at present placed in *Lispinus* will probably be found to belong here. Arnett (1961) used the name *Pseudolispinodes* for this genus and treated it as a subgenus of *Lispinus*. It possibly might best be considered a subgenus of *Lispinus*, but the name *Nacaeus* must apply in any case.

*Renardia* Motschulsky

**Form.** Elongate, parallel, very depressed, integuments shining, alutaceous.

**Head.** Head quadrate, with 2 longitudinal frontal impressions, narrowed behind to form broad neck. Eyes moderate, somewhat prominent. Antennae slightly incrassate, penultimate segments transverse; their fossae located in front of eyes under distinct prominences. Mandibles stout at base, short, only slightly arcuate, each with a minute tooth near apex. Labrum transverse; anterior margin deeply, evenly emarginate and furnished with 5 long setae on each side. Maxillary palpi 4 segmented; first 2 segments short; third longer than wide; fourth about half as wide as third and a little shorter. Inner lobe of maxillae narrow, pointed, hooked at apex. Outer lobe wide at apex, which is densely ciliate. Labial palpi 3-segmented; first segment stout, widest at apex, second very short, transverse; third narrower than second, about twice as long as wide, slightly narrowed to rounded apex. Ligula broad, membranous, with 2 short central processes. Gular sutures very approximate at middle, widely diverging before and behind. Infraorbital carina wanting. Without a sulcus on the under side behind eye.

**Thorax.** Pronotum longer than wide, narrowed at base, with a tubercle on each side of anterior margin; longer in male than female. Prosternum much elongated, its process short and acute, not separating coxae. Lateral prosternal suture distinct. Hypomera not delimited by suture. Trochantin wide, very long, directed diagonally toward anterior angle of thorax. Prosternal epimeron not delimited by suture. Mesosternum short, its process short and acute. Metasternum very long, its process short and acute. Elytra elongate, epipleura not delimited by carina. Scutellum prominent. Coxae contiguous; anterior small, peg-shaped; middle longer, rounded; posterior transverse and somewhat triangular. Tibiae without spines. Tarsi 5-segmented, first 4 segments short, last longer than first 4 together.

**Abdomen.** Paratergites lacking. First visible sternite not keeled between coxae.

**Distribution.** Only 4 species have been described in this genus, 1 from the United States, 1 from Mexico, and 2 from Guatemala. They are found under the bark of trees.

**Notes.** Members of this genus closely resemble species of *Eleusis*, from which they differ in the frontal impressions, stronger antennal tubercles, the tubercles at the anterior margin of the pronotum, coarser sculpture and other details. This genus has long been called *Eumalus*. Hammond (1970) called attention to the fact that the type of *Renardia* is the same as *Eumalus nigrella* (LeConte) and that the name *Renardia* has precedence.

*Thoracophorus* Motschulsky

**Form.** Small, subcylindrical. Integuments coarsely sculptured, rough; foreparts longitudinally costate.

**Head.** Head orbicular, abruptly narrowed behind to form a distinct neck; anterior margin limited by carina which extends back on each side above and behind eyes; upper surface longitudinally costate. Eyes small, not visible from above. Antennae somewhat increassate, penultimate segments transverse; their fossae located under anterior carina in front of eyes. Mandibles stout, almost parallel from base to near apex, thence abruptly constricted and tapered to a hooked, pointed apex. Labrum transverse, apex emarginate in deep, even arc, and supplied with several long setae. Maxillary palpi 4-segmented; first segment short, second longer, curved, widest at apex; third short, transverse, as wide as apex of second; fourth as wide at base as third, twice as long as wide, a little narrowed to rounded apex. Outer lobe of maxilla slender, with 2 small curved teeth at tip below which are a few closely placed ciliae in a row. Inner lobe broad, densely ciliate at apex. Labial palpi 3-segmented; first and third segment each about twice as long as wide; second transverse; segments of equal width. Ligula broad, slightly produced in middle. Gular sutures widely divergent posteriorly. Infraorbital carina wanting.

**Thorax.** Pronotum quadrate, longitudinally costate. Prosternum large, its process hardly pointed. Lateral prosternal sutures faint. Hypomera delimited by carina. Trochantin rectangular, not easily distinguished from prosternum. Prosternal epimera not delimited by suture. Mesosternum short, its process narrow, pointed, produced more than halfway between coxae. Metasternum long, its process short, pointed, meeting mesosternal process between coxae. Elytra quadrate, longitudinally costate, epipleura delimited by carina. Scutellum visible. Anterior coxae small, peg-shaped, contiguous. Middle coxae round, narrowly separated. Posterior coxae transverse, somewhat triangular. Tibiae without spines. Tarsi 3-segmented, first 2 segments very small, last several times as long as first 2 together.

**Abdomen.** Abdomen cylindrical, without paratergites, first 5 visible segments abruptly constricted at base. First visible segment broadly, deeply impressed beneath on each side for reception of coxae; with small keel between coxae.

**Distribution.** Most of the known 47 species of this genus are from Latin America; however, several species are known from other tropical regions as well as 4 from the United States, 1 from Europe, and 1 from Japan. They are generally found under the bark of decaying trees.

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## GENDER POINTS: A TIMESAVER FOR MICROCOLEOPTERISTS

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The time involved in properly preparing beetles, especially microcoleoptera, for taxonomic study is considerable. In many (most?) genera the male genitalia and/or female spermathecae must be removed by dissection and placed in an appropriate receptacle. The specimen, after being cleaned in a sonic apparatus, must then be affixed to a paper point (which had to be previously prepared and placed on a pin). Following this, the genitalia receptacle, locality label(s), and (in some instances) ecological data label(s) are added. Finally, a sex label must be cut from a sheet of same and affixed to the pin to facilitate retrieval of the specimen once it has been placed in the collection. Multiply this procedure by thousands of specimens, and the time saved by the obviation of a single step in the process becomes considerable.

A step can be eliminated by using a gender point, (i.e., a point upon which the appropriate sex symbol has been printed). Apparently, sex symbols of the appropriate size and printed upon point paper are not commercially available. The symbols must be spaced so that the point can be cut out with a point punch without cutting into adjacent symbols in the same row, or symbols in the next row. Sheets for use in making gender points have been readily made by typing (on a machine with elite type) an 8½" × 11" page with sex symbols, then submitting the page and blank point paper to a printer for reduction and printing. With elite type (symbols are 3mm high and 2mm wide), the symbols should be placed 2 spaces apart (7mm from center to center) in the rows, and the rows 2cm apart. The sheet is then reduced 50%. The resulting symbols can be easily punched out, with ample area for the pin to be inserted between the base of the point and the symbol.